

ABSTRACT OF THE DISCLOSURE

A method and system for the extracorporeal treatment of blood to remove fluid from the fluid overloaded patient is disclosed that non-invasively measures osmotic pressure across a filter membrane of a blood filter. The filter is permeable to water and electrolytes, but not to blood protein. The osmotic pressure indicates the protein concentration in the blood. Osmotic pressure is used to detect when hypotension is about to occur in a patient, as a result of excessive blood volume reduction during treatment of the blood. Using the osmotic pressure measurement as a feedback signal, the rate of fluid extraction is automatically controlled to achieve the desired clinical outcome and avoid precipitating a hypotensive crisis in the patient.